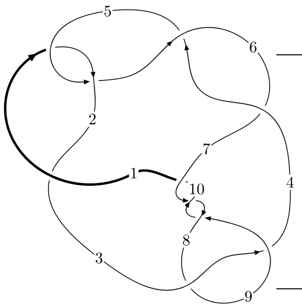
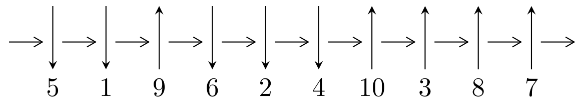
10_{37} $(K10a_{49})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$$3,8 \xrightarrow[c_8]{} 9 \xrightarrow[c_3]{} 4 \xrightarrow[c_9]{} 10 \xrightarrow[c_7]{} 7 \xrightarrow[c_{10}]{} 1 \xrightarrow[c_2]{} 2 \xrightarrow[c_6]{} 6 \xrightarrow[c_5]{} 5 \twoheadrightarrow c_1, c_4$$

Ideals for irreducible components[2]of $X_{\mathbf{par}}$

$$I_1^u = \langle u^{26} - u^{25} + \cdots + u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 26 representations.

[1]The image of knot diagram is generated by the software "**Draw programme**" developed by Andrew Bartholomew(`http://www.layer8.co.uk/maths/draw/index.htm#Running-draw`), where we modified some parts for our purpose(`https://github.com/CATsTAILs/LinksPainter`).

[2]All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

I. $I_1^u = \langle u^{26} - u^{25} + \cdots + u + 1 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^2 + 1 \\ -u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^4 - u^2 + 1 \\ u^4 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^6 + u^4 - 2u^2 + 1 \\ -u^6 - u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{13} - 2u^{11} + 5u^9 - 6u^7 + 6u^5 - 4u^3 + u \\ u^{13} - u^{11} + 3u^9 - 2u^7 + 2u^5 - u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^8 - u^6 + 3u^4 - 2u^2 + 1 \\ -u^{10} + 2u^8 - 3u^6 + 4u^4 - u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^{15} - 2u^{13} + 6u^{11} - 8u^9 + 10u^7 - 8u^5 + 4u^3 \\ -u^{17} + 3u^{15} - 7u^{13} + 12u^{11} - 13u^9 + 12u^7 - 6u^5 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{25} + 16u^{23} - 4u^{22} - 52u^{21} + 12u^{20} + 116u^{19} - 36u^{18} - 204u^{17} + 64u^{16} + 292u^{15} - 96u^{14} - 328u^{13} + 104u^{12} + 296u^{11} - 88u^{10} - 200u^9 + 40u^8 + 88u^7 - 8u^6 - 8u^5 - 20u^4 - 8u^3 + 12u^2 + 12u - 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{26} + u^{25} + \cdots - u + 1$
c_2, c_4, c_6	$u^{26} + 7u^{25} + \cdots + 3u + 1$
c_3, c_8	$u^{26} - u^{25} + \cdots + u + 1$
c_7, c_9, c_{10}	$u^{26} - 7u^{25} + \cdots - 3u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_5 c_8	$y^{26} - 7y^{25} + \cdots - 3y + 1$
c_2, c_4, c_6 c_7, c_9, c_{10}	$y^{26} + 25y^{25} + \cdots + 13y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.012160 + 0.254718I$	$7.03067 + 0.01867I$	$5.98123 - 1.03882I$
$u = 1.012160 - 0.254718I$	$7.03067 - 0.01867I$	$5.98123 + 1.03882I$
$u = -1.013780 + 0.289330I$	$6.82471 - 6.16497I$	$5.29314 + 6.39075I$
$u = -1.013780 - 0.289330I$	$6.82471 + 6.16497I$	$5.29314 - 6.39075I$
$u = -0.813977 + 0.362129I$	$- 3.36877I$	$0. + 8.60580I$
$u = -0.813977 - 0.362129I$	$3.36877I$	$0. - 8.60580I$
$u = -0.773091 + 0.826946I$	$- 1.11937I$	$0. + 2.31583I$
$u = -0.773091 - 0.826946I$	$1.11937I$	$0. - 2.31583I$
$u = 0.783473 + 0.854699I$	$-0.63001 - 4.85595I$	$-1.10716 + 2.80733I$
$u = 0.783473 - 0.854699I$	$-0.63001 + 4.85595I$	$-1.10716 - 2.80733I$
$u = -0.887854 + 0.783648I$	$-3.75047 - 2.94952I$	$0.57746 + 2.74210I$
$u = -0.887854 - 0.783648I$	$-3.75047 + 2.94952I$	$0.57746 - 2.74210I$
$u = 0.863693 + 0.835096I$	$-7.03067 - 0.01867I$	$-5.98123 + 1.03882I$
$u = 0.863693 - 0.835096I$	$-7.03067 + 0.01867I$	$-5.98123 - 1.03882I$
$u = 0.779118 + 0.130510I$	$1.314850 + 0.335766I$	$6.85384 - 0.55767I$
$u = 0.779118 - 0.130510I$	$1.314850 - 0.335766I$	$6.85384 + 0.55767I$
$u = 0.929921 + 0.812975I$	$-6.82471 + 6.16497I$	$-5.29314 - 6.39075I$
$u = 0.929921 - 0.812975I$	$-6.82471 - 6.16497I$	$-5.29314 + 6.39075I$
$u = -0.979820 + 0.768887I$	$0.63001 - 4.85595I$	$1.10716 + 2.80733I$
$u = -0.979820 - 0.768887I$	$0.63001 + 4.85595I$	$1.10716 - 2.80733I$
$u = 0.987090 + 0.785195I$	$10.9658I$	$0. - 7.61359I$
$u = 0.987090 - 0.785195I$	$- 10.9658I$	$0. + 7.61359I$
$u = -0.034282 + 0.657607I$	$3.75047 + 2.94952I$	$-0.57746 - 2.74210I$
$u = -0.034282 - 0.657607I$	$3.75047 - 2.94952I$	$-0.57746 + 2.74210I$
$u = -0.352654 + 0.410519I$	$-1.314850 + 0.335766I$	$-6.85384 - 0.55767I$
$u = -0.352654 - 0.410519I$	$-1.314850 - 0.335766I$	$-6.85384 + 0.55767I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{26} + u^{25} + \cdots - u + 1$
c_2, c_4, c_6	$u^{26} + 7u^{25} + \cdots + 3u + 1$
c_3, c_8	$u^{26} - u^{25} + \cdots + u + 1$
c_7, c_9, c_{10}	$u^{26} - 7u^{25} + \cdots - 3u + 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_5 c_8	$y^{26} - 7y^{25} + \cdots - 3y + 1$
c_2, c_4, c_6 c_7, c_9, c_{10}	$y^{26} + 25y^{25} + \cdots + 13y + 1$